CLAIMS

Please cancel claims 1-11 without prejudice. Please add new claims 12-17 reading as follows:

Claims 1-11 (cancelled)

Claim 12 (new): A reproduced signal equalizing method for optical information media in which reproduced signals obtained by irradiating laser light to an optical information medium are equalized so as to bring a waveform thereof close to a waveform having predetermined characteristics, the method comprising the steps of:

sampling reproduced signals in a predetermined cycle;

equalizing the said sampled waveform with the predetermined initial equalization coefficient;

obtaining a provisional binarized data by inputting the said equalized waveform thereof to the Viterbi decoder and demodulating the said equalized waveform by the Viterbi decoder;

generating a target waveform from the provisional binarized data and a predetermined partial response waveform;

calculating an equalization coefficient for producing a smallest difference between the said target waveform and an equalized waveform by the least square technique by using a matrix calculation; and

equalizing reproduced signals by using the calculated equalization coefficient.

Claim 13 (new): A reproduced signal equalizing method according to claim 12, wherein 3000 or more sampled waveforms are used in the said matrix calculation.

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Claim 14 (new): A reproduced signal equalizing method for optical information media in which reproduced signals obtained by irradiating laser light to an optical information medium are equalized so as to bring a waveform thereof close to a waveform having predetermined characteristics, the method comprising the steps of:

sampling reproduced signals in a predetermined cycle;

inputting the reproduced signals sampled in the predetermined cycle to a Viterbi decoder;

defining a target waveform as a waveform based on binarized data demodulated by the Viterbi decoder and a partial response waveform;

calculating an equalization coefficient for producing a smallest difference between the said target waveform and an equalized waveform by the least square technique by using a matrix calculation; and

equalizing reproduced signals by using the calculated equalization coefficient.

Claim 15 (new): A reproduced signal equalizing method according to claim 14, wherein 3000 or more sampled waveforms are used in the said matrix calculation.

Claim 16 (new): An optical information reproducing apparatus having a function for equalizing reproduced signals by using the reproduced signals equalizing method according to claim 12.

Claim 17 (new): An optical information reproducing apparatus having a function for equalizing reproduced signals by using the reproduced signals equalizing method according to claim 14.

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